

I. Prior Art Rejections:

Rejection of Claims 1-4, 6-10 and 12-39 Under 35 U.S.C. § 103(a) Over Ahmed:

Claims 1-4, 6-10, and 12-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,981,457 issued to Ahmed (hereinafter "Ahmed"). This rejection is respectfully traversed.

Applicants' claimed invention, embodied in independent claim 1, is drawn to a method of cleaning a hard surface, wherein the method comprises, *inter alia*, applying a non-corrosive, low-fuming composition to the surface wherein the composition comprises (a) from about 3.0 wt-% to 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; (b) from about 0.1 wt-% to 20 wt-% of an alkalinity source effective to provide a pH of from about 10 to 14 to said composition; (c) from about 0.0 wt-% to 5.0 wt-% of at least one thickening agent to promote adhesion of said thickened, non-corrosive composition to the surface upon application; (d) from about 0.0 wt-% to 5 wt-% of fatty acid stabilizer to maintain a homogenous mixture of said at least one builder, at least one thickening agent, and alkalinity source; (e) from about 0.0 wt-% to 5.0 wt-% of anionic surfactant effective to provide detergency to the thickened, non-corrosive low-fuming composition said anionic surfactant selected from the group consisting of an alkyl sulfate, an alkyl sulfonate, a disulphonate compound, an alkyl ether sulfate, an alkyl ether sulfonate, and mixtures thereof; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water; **wherein the composition is sprayable and substantially free of chlorine.**

Applicants' claimed invention, embodied in independent claim 10, is drawn to a **sprayable** thickened, hard surface cleaning composition comprising, *inter alia*, (a) from about 0.1 wt-% to 20.0 wt-% of at least one detergent builder selected from tripolyphosphates, salts of alkali metal borates, phosphates, carbonates and bicarbonates, and mixtures thereof; (b) from about 0.1 wt-% to 5 wt-% of at least one thickening agent effective to provide increased viscosity; (c) from about 0.1 wt-% to 3.0 wt-% of an alkali metal hydroxide to provide a pH of about 10 to 14; (d) from about 0.5 wt-% to 5.0 wt-% of an anionic surfactant to provide detergency to the composition; (e) from about 0.0 wt-% to 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one

thickening agent, and alkali metal hydroxide; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water; wherein said composition is substantially free of chlorine.

Applicants' claimed invention, embodied in independent claim 17, is drawn to a method of cleaning a hard surface with an adherent, thickened, non-corrosive, low-fuming composition, wherein the method comprises, *inter alia*, **spraying** the composition onto the hard surface, wherein the composition comprises (a) from about 0.1 to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; salts of alkali metal borates, phosphates, carbonates and bicarbonates; and mixtures thereof; (b) from about 0.1 to about 1.0 wt-% of at least one thickener; (c) from about 0.1 to about 3.0 wt-% of an alkali metal hydroxide alkalinity source providing a composition pH of greater than about 11; (d) from about 0.05 to about 5 wt-% of an anionic surfactant said anionic surfactant selected from the group consisting of a sulphate compound, a sulphonate compound, a disulphonate compound and mixtures thereof; and (e) from about 0.0 to about 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkali source; wherein the composition has a viscosity ranging from about 30 to 300 Cps at 25°C and, upon application, at least about 75 wt-% of the non-corrosive, low fuming composition adheres to the surface of application for at least about 30 minutes; and wherein the composition is substantially free of chlorine.

Applicants' claimed invention, embodied in independent claim 23, is drawn to a method of cleaning a hard surface, wherein the method comprises, *inter alia*, applying a non-corrosive, low-fuming **sprayable** composition to the surface, wherein the composition consists essentially of (a) from about 0.1 wt-% to 20.0 wt-% of at least one detergent builder selected from tripolyphosphates, salts of alkali metal borates, phosphates, carbonates and bicarbonates, and mixtures thereof; (b) from about 0.1 wt-% to 20 wt-% of an alkalinity source effective to provide a pH of from about 10 to 14 to said composition; (c) from about 0.0 wt-% to 5.0 wt-% of at least one thickening agent to promote adhesion of said thickened, non-corrosive composition to the surface upon application; (d) from about 0.0 wt-% to 5 wt-% of fatty acid stabilizer to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkalinity source; (e) from about 0.5 wt-% to 5.0 wt-% of anionic surfactant effective

to provide detergency to the thickened, non-corrosive low-fuming composition said anionic surfactant selected from the group consisting of an alkylsulfate, an alkyl sulfonate, a disulphonate compound, an alkyl ether sulfate, an alkyl ether sulfonate, and mixtures thereof; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water.

The teaching of Ahmed is directed to concentrated liquid gel warewash detergents. The disclosed gel compositions contain from about 5 wt% to about 30 wt% of alkali metal detergent builder salt, from about 8 wt% to about 50 wt% of a source of alkalinity, from about 0 wt% to about 5 wt% of a water dispersible or water soluble organic surface active agent, from about 0.1 wt% to about 2 wt% of a neutralized crosslinked hydrophilic polycarboxylate thickening agent, from about 0 wt% to about 15 wt% of a noncrosslinked polyacrylate, from about 0.1 wt% to about 2 wt% of a hydrogen bonding agent for the polycarboxylate thickening agent, and desirably, a chlorine bleach compound to provide up to 5 wt% of available chlorine (Ahmed, column 2, lines 34-48, and column 6, line 63 to column 7, line 22). The disclosed compositions are specifically prepared for use in warewash machines, and are specifically formulated in a concentrated liquid gel form so that the compositions can be accurately metered into warewash machines (see Ahmed, Abstract).

The disclosed gel compositions of Ahmed are not sprayable. In fact, the teaching of Ahmed teaches away from sprayable compositions by specifically teaching concentrated liquid gel compositions, which "can be accurately dispensed using a metered dispenser such as peristaltic pump" (Ahmed, column 2, lines 34-50). Those of ordinary skill in the art understand that sprayable compositions have a viscosity of less than about 300 cps. In the Examples, Ahmed discloses various liquid gel compositions having viscosities to provide a gel-like consistency. The lowest viscosity disclosed in the various liquid gel compositions is 2500 cps (samples 40-4 and 69-2).

The teaching of Ahmed fails to teach or suggest Applicants' claimed invention. In particular, the teaching of Ahmed fails to teach or suggest (i) a method of cleaning a surface using a sprayable composition (as recited in each of Applicants' independent claims 1, 17, and 23), and (ii) a non-corrosive, low-fuming sprayable cleaning composition (as recited in Applicants' independent claim 10). There is no suggestion in the teaching of Ahmed to one of

ordinary skill in the art to prepare sprayable cleaning compositions. As discussed above, the teaching of Ahmed teaches away from sprayable cleaning compositions.

Given that the teaching of Ahmed fails to teach or suggest Applicants' claimed methods and cleaning compositions as featured in each of Applicants' independent claims 1, 10, 17, and 23, the teaching of Ahmed cannot make obvious Applicants' claimed invention embodied in independent claims 1, 10, 17, and 23. Since claims 2-4, 6-9, 12-16, 18-22, and 24-39 depend from independent claims 1, 10, 17, and 23, and recite additional claim features, the teaching of Ahmed cannot make obvious claims 2-4, 6-9, 12-16, 18-22, and 24-39. Accordingly, Applicants respectfully request withdrawal of this rejection.

It should be further noted that the teaching of Ahmed also fails to teach or suggest at least the following claim features recited in the following claims:

(1) a method of applying a cleaning composition to a substantially vertical surface (claim 2);

(2) a method of applying a cleaning composition to a substantially vertical surface, wherein at least about 75 wt-% of the cleaning composition adheres to the substantially vertical surface for a time period up to about 30 minutes (claim 2);

(3) a sprayable cleaning composition having a viscosity ranging from about 30 to about 300 Cps. at 25°C (claim 12);

(4) a method of applying a cleaning composition to a substantially vertical surface, wherein at least about 85 wt-% of the cleaning composition adheres to the substantially vertical surface for a time period up to about 30 minutes (claim 18);

(5) a method of applying a cleaning composition to a substantially vertical surface, wherein at least about 95 wt-% of the cleaning composition adheres to the substantially vertical surface for a time period up to about 30 minutes (claim 19);

(6) a method of applying a cleaning composition to a hard surface, wherein the composition *consists essentially of*: (a) from about 0.1 wt-% to 20.0 wt-% of at least one detergent builder selected from tripolyphosphates, salts of alkali metal borates, phosphates, carbonates and bicarbonates, and mixtures thereof; (b) from about 0.1 wt-% to 20 wt-% of an alkalinity source effective to provide a pH of from about 10 to 14 to said composition; (c) from about 0.0 wt-% to 5.0 wt-% of at least one thickening agent to promote adhesion of said

thickened, non-corrosive composition to the surface upon application; (d) from about 0.0 wt-% to 5 wt-% of fatty acid stabilizer to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkalinity source; (e) from about 0.5 wt-% to 5.0 wt-% of anionic surfactant effective to provide detergency to the thickened, non-corrosive low-fuming composition said anionic surfactant selected from the group consisting of an alkylsulfate, an alkyl sulfonate, a disulphonate compound, an alkyl ether sulfate, an alkyl ether sulfonate, and mixtures thereof; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water (claim 23);

(7) a method of applying a cleaning composition to a hard surface, wherein the composition comprises at least one thickening agent comprising one or more expandable clays (claim 27);

(8) a sprayable cleaning composition comprising at least one thickening agent comprising one or more expandable clays (claim 31);

(9) a sprayable cleaning composition comprising at least one thickening agent comprises a xantham gum (claim 32);

(10) a sprayable cleaning composition *consisting essentially of*: (a) from about 0.1 wt-% to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; salts of alkali metal borates, phosphates, carbonates and bicarbonates; and mixtures thereof; (b) from about 0.1 wt-% to about 5 wt-% of at least one thickening agent effective to provide increased viscosity; (c) from about 0.1 wt-% to about 3.0 wt-% of an alkali metal hydroxide to provide a pH of about 10 to about 14; (d) from about 0.5 wt-% to about 5.0 wt-% of an anionic surfactant to provide detergency to the composition; (e) from about 0.0 wt-% to about 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkali metal hydroxide; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water (claim 33);

(11) a sprayable cleaning composition *consisting essentially of*: (a) from about 3.0 wt-% to about 13.0 wt-% of at least one detergent builder selected from tripolyphosphates; (b) from about 0.1 wt-% to about 5 wt-% of at least one thickening agent comprising one or more polycarboxylate polymers; (c) from about 0.1 wt-% to about 3.0 wt-% of an alkali metal hydroxide to provide a pH of about 10 to about 14; (d) from about 0.5 wt-% to about 5.0 wt-%

of an anionic surfactant comprising an alkyl sulfate, an alkyl aryl sulfonate, or a mixture thereof; (e) from about 0.0 wt-% to about 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkali metal hydroxide; (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and (g) a balance of water (claim 34); and

(12) a method of applying a cleaning composition to a hard surface, wherein the composition comprises at least one thickening agent comprising one or more expandable clays (claim 38).

## II. New Claims 40-44:

New claims 40-44 depend from independent claims 1, 10 and 23, and recite additional claim features. Support for new claims 40-44 may be found in at least the following locations: page 4, lines 2-14; and page 7, line 19 to page 8, line 3.

Applicants respectfully submit that new claims 40-44 are patentable over the art of record for at least the reasons given above with regard to claims 1-4, 6-10, and 12-39.

## III. Conclusion:

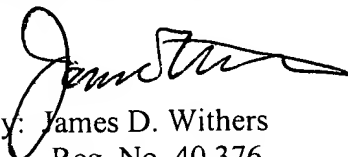
For at least the reasons given above, Applicants submit that claims 1-4, 6-10, and 12-44 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 13-2725.

Should the Examiner believe that anything further is necessary to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

Amendment And Response  
Serial No. 09/837,398

Respectfully submitted,  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
<b>TADROWSKI ET AL.</b>	)	Art Unit: <b>1751</b>
	)	
Serial No.: <b>09/837,398</b>	)	Examiner: <b>Ogden Jr., N.</b>
	)	
Filed: <b>April 18, 2001</b>	)	Kay Matter No.: <b>QO 1465US01-Kay</b>
	)	
For: <b>HARD SURFACE CLEANER AND</b>	)	
<b>METHOD OF USE</b>	)	

**MARKED UP VERSIONS OF SPECIFICATION PARAGRAPHS ACCOMPANYING  
APPLICANTS' MARCH 04, 2003 PRELIMINARY AMENDMENT**

Applicants provides the following marked up versions of the specification and claims, which were amended in Applicants' March 04, 2003 Preliminary Amendment and request for an RCE filed in response to the December 04, 2002 Office Action. In the amendments below, [brackets] are used to show where terms were removed from the specification or claims, while underlines are used to show where terms were added to the specification or claims.

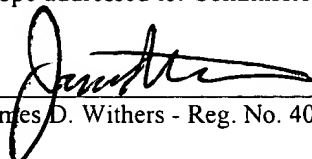
**In the Specification:**

The following amendments were made to the specification:

In the paragraph from page 7, line 19 to page 8, line 3:

The composition of the invention may also comprise a thickener. For products formulated to be used on vertical surfaces, a thickener component will be included. One or more thickeners or suspending agents can be used in accordance with the invention to provide the aqueous medium with thickened properties. Preferred thickeners for use with the present

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invention result in a product that is sprayable and foamable. Desirably, the sprayable product has a Brookfield viscosity ranging from about 30 to about 300 cps, more desirably, from about 30 to about 100 cps, and even more desirably, from about 50 to about 70 cps. Organic polymeric thickeners and inorganic colloid forming clay materials are examples of those thickeners which may be used. The thickeners should be stable in high alkalinity.

In the paragraph from page 12, line 21 to page 13, line 2:

In order to provide an alkaline pH, the composition comprises an alkalinity source. The alkalinity source may be used up to levels that would be below extremely irritating to the eyes. Generally, the alkalinity source raises the pH of the composition to at least about 10, generally to a range from about 10 to 14, preferably from about 11 to 14, and most preferably from about 12 to 13.5.

In the paragraph from page 15, line 19 to page 16, line 3:

The thickened non-corrosive, low-fuming composition of the invention may be prepared by any means known to those of ordinary skill in the art. Generally, water and, if used, the optional thickener are added to a mixing vessel and mixed for a period of time sufficient to provide a homogenous mixture, about 2.5 to 3 hours. These constituents may be added slowly by screening to ensure complete dissolution. Once homogenous, a detergent builder is added to the system with continued mixing up to about 3 hours. Appropriate testing may be done to ensure the necessary presence of all constituents, for example, tripolyphosphate and thickener.

In the paragraph on page 16, lines 4-11:

Once formulated, the composition of the invention may be applied to any food surface having baked on soils to facilitate cleaning. Desirably, the composition of the present invention is applied to a surface by spraying the composition. After application for a time period ranging from about 1 minute to about 3 hours, the composition of the invention may be wiped or rinsed

from the surface of application. The invention may be used on surfaces and food preparation equipment made of metal comprised of metal alloys, and enameled surfaces. The composition and methods of the invention may also be used on any other surfaces, including vertical or substantially vertical surfaces in any environment requiring cleaning of baked on soils.

**In the Claims:**

The following amendments were made to the claims:

1. (Twice Amended) A method of cleaning a hard surface, said method comprising:  
applying a non-corrosive, low-fuming composition to the surface, said composition comprising:
  - (a) from about 3.0 wt-% to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates;
  - (b) from about 0.1 wt-% to about 20 wt-% of an alkalinity source effective to provide a pH of from about 10 to about 14 to said composition;
  - (c) from about 0.0 wt-% to about 5.0 wt-% of at least one thickening agent to promote adhesion of said thickened, non-corrosive composition to the surface upon application;
  - (d) from about 0.0 wt-% to about 5 wt-% of fatty acid stabilizer to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkalinity source;
  - (e) from about 0.0 wt-% to about 5.0 wt-% of an anionic surfactant effective to provide detergency to the thickened, non-corrosive low-fuming composition said anionic surfactant selected from the group consisting of an alkyl sulfate, an alkyl sulfonate, a disulphonate compound, an alkyl ether sulfate, an alkyl ether sulfonate, an alkyl aryl sulfonate, and mixtures thereof;
  - (f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and
  - (g) a balance of water;wherein the composition is sprayable and substantially free of chlorine.

10. (Twice Amended) A sprayable thickened hard surface cleaning composition comprising:

(a) from about 0.1 wt-% to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; salts of alkali metal borates, phosphates, carbonates and bicarbonates; and mixtures thereof;

(b) from about 0.1 wt-% to about 5 wt-% of at least one thickening agent effective to provide increased viscosity;

(c) from about 0.1 wt-% to about 3.0 wt-% of an alkali metal hydroxide to provide a pH of about 10 to about 14;

(d) from about 0.5 wt-% to about 5.0 wt-% of an anionic surfactant to provide detergency to the composition;

(e) from about 0.0 wt-% to about 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkali metal hydroxide;

(f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and

(g) a balance of water;

wherein said composition is substantially free of chlorine.

12. (Amended) The composition of claim 10, wherein said composition has a viscosity ranging from about 30 to [10,000] about 300 Cps. at 25°C.

17. (Twice Amended) A method of cleaning a hard surface with an adherent, thickened, non-corrosive low-fuming composition, said method comprising [applying] spraying said composition [to] onto the hard surface, said composition comprising:

(a) from about 0.1 to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; salts of alkali metal borates, phosphates, carbonates and bicarbonates; and mixtures thereof;

(b) from about 0.1 to about 1.0 wt-% of at least one thickener;

(c) from about 0.1 to about 3.0 wt-% of an alkali metal hydroxide alkalinity source providing a composition pH of greater than about 11;

(d) from about 0.05 to about 5 wt-% of an anionic surfactant said anionic surfactant selected from the group consisting of a sulphate compound, a sulphonate compound, a disulphonate compound and mixtures thereof; and

(e) from about 0.0 to about 5 wt-% of a fatty acid stabilizer effective to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkali source wherein said composition has a viscosity ranging from about 30 to 10000 Cps at 25°C and, upon application, at least about 75 wt-% of the non-corrosive, low fuming composition adheres to the surface of application for at least about 30 minutes; and

wherein the composition is substantially free of chlorine.

23. (Twice Amended) A method of cleaning a hard surface, said method comprising:

applying a sprayable non-corrosive, low-fuming composition to the surface, said composition consisting essentially of:

(a) from about 0.1 wt-% to about 20.0 wt-% of at least one detergent builder selected from tripolyphosphates; salts of alkali metal borates, phosphates, carbonates and bicarbonates; and mixtures thereof;

(b) from about 0.1 wt-% to about 20 wt-% of an alkalinity source effective to provide a pH of from about 10 to about 14 to said composition;

(c) from about 0.0 wt-% to about 5.0 wt-% of at least one thickening agent to promote adhesion of said thickened, non-corrosive composition to the surface upon application;

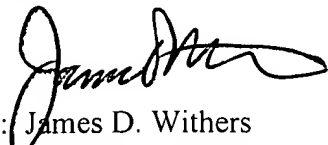
(d) from about 0.0 wt-% to about 5 wt-% of fatty acid stabilizer to maintain a homogenous mixture of said at least one detergent builder, at least one thickening agent, and alkalinity source;

(e) from about 0.5 wt-% to about 5.0 wt-% of an anionic surfactant effective to provide detergency to the thickened, non-corrosive low-fuming composition said anionic surfactant selected from the group consisting of an alkyl sulfate, an alkyl sulfonate, a disulphonate compound, an alkyl ether sulfate, an alkyl ether sulfonate, an alkyl aryl sulfonate, and mixtures thereof;

(f) from about 0.0 wt-% to about 2.0 wt-% of a metal ion chelator; and

(g) a balance of water.

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